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ABSTRACT

This paper is a review of recent research relevant to Holland's theory of vocational choice as it may apply to non-professional workers. Section I focuses on studies which use working adults and, to some extent, vocational high school students as subjects. Section II provides a review of sociological viewpoints of the impact which chance factors may make on an individual's vocational decision. In general, the reviewers found mixed results concerning the validity of Holland's theoretical propositions. There is some evidence that person-environment congruence is related to other important vocational variables and much agreement--across theorists and researchers--that workers search for a vocational environment compatible with their vocational personality. Other hypothetical assumptions made by Holland were less well supported. They include the concept of the consistency of a vocational personality and the interpretation of personality patterns as homogeneous differentiated or heterogeneous. There is much evidence to support Holland's vocational typology. (Author)

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PAUL R. SALOMONE, DIRECTOR

THE VOCATIONAL CHOICE PROCESS OF NON-PROFESSIONAL WORKERS:

A REVIEW OF HOLLAND'S THEORY AND THE SOCIOLOGICAL THEORIES

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MONOGRAPH I

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ABSTRACT

The purpose of this paper is to review recent research relevant to Holland's theory of vocational choice as it may apply to non-professional, non-managerial workers. Section I focuses on studies which use working adults as subjects and, to some extent, on studies in which vocational high school students comprise the sample. A review of research on college students has been specifically omitted since Holland's (1973) literature review (entitled "Some evidence") is comprehensive and up-to-date. Section II provides a review of sociological viewpoints of the impact which chance factors may make on an individual's vocational decision.

In general, the reviewers found mixed results concerning the validity of Holland's theoretical propositions. There is some evidence that person-environment congruence is related to other important vocational variables (i.e., satisfaction and achievement) and much agreement - across theorists and researchers - that workers search for a vocational environment compatible with their vocational personality which includes needs, interests, orientations, etc. The notion of "occupational fit" or "self-job matching" is an old one and, apparently, still viewed as important and useful.

Other hypothetical assumptions made by Holland (1966, 1973) were less well supported. They include the concept of the "consistency" of a vocational personality, and the interpretation of personality patterns as homogeneous (differentiated) or heterogeneous. Much evidence is noted in Holland's (1973) book to support the basic theory that personal, vocational and environmental orientations can be categorized into six types and that a useful occupational classification system can, thereby, be derived.

Lastly, the paper contains a discussion of the varying views and orientations of psychologists and sociologists as they study (or ignore) the impact of environmental influences on the vocational decision-making process of non-professional workers. The discussion includes the notation that chance occurrences and contingency factors (for example, socio-economic status) influence the decision of every individual, but are especially critical to the non-professional. Such workers, more so than others, seem to be affected by non-psychological (i.e., social, economic and chance) circumstances in their lives. They simply do not have the resources, the training opportunities or the experiences to be as much the "prime mover" regarding vocational decisions as do professional, better-educated workers.

PREFACE

The purpose of a literature review is to describe - and integrate - a series of studies. In addition, the reader should feel that some global purpose was served, some definitive conclusions were made. These activities are easy to write about - but difficult to perform. Another problem faced by a reviewer is the necessity to provide some detail, yet balance it with the required broad brush stroke to retain the readers' interest. In writing this review we have attempted, no doubt with varying degrees of success, to find an acceptable compromise between the dry, hard-to-read literature review that many professional explorers expect, and the loose (but usually interesting) off-the-cuff remarks typical of an after dinner speech at your state professional convention.

We believe that thoroughness is important in a literature review, but that clarity of the communication and the understanding of the reader is paramount. We therefore offer two suggestions:

1. We suggest that you skim the entire paper first, then read sections of interest. Do not judge the second section by the first, or vice versa; read quickly for a view of the entire landscape, then settle on those sections which you find valuable.
2. We strongly suggest that you read Holland's new book and Osipow's classic review of vocational choice theories. They are both very well written, informative and interesting. You might also find APGA's recent monograph useful: Whiteley, J.M. and Resnikoff, A. Perspectives on vocational development. Washington: American Personnel and Guidance Association, 1972.

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December, 1973

INTRODUCTION

Social scientists from many disciplines have found career development and the vocational choice, decision-making process interesting, even intriguing, and often confusing. Prominent career development or vocational choice theories currently exist which, in part, may satisfy the intellectually curious but which really have not provided much guidance to vocational counselors. This gap between ivory-tower theorists and reality-based practitioners is understandable because, as Holland (1973) noted, very few people (including researchers, teachers, and practitioners) actually read the literature and because it is mich easier to explain research results in statistical terms than to show how they might be applicable in the real world. Writing precisely and clearly is hard work; explaining results with a degree of creative perception may be beyond the capacity of most mortals (including professors).

There have been several attempts to draw together psychologists, sociologists and economists on the issue of vocational choice. These efforts have resulted in integrative commentaries (Hewer, 1963) on the viewpoints of various types of scholars and, even earlier, have produced new theoretical statements concerning the vocational choice process from interdisciplinarian groups.

Sociologists such as Miller and Form (1951) and Caplow (1954) underscore social structure as a major factor in occupational choice. Harris (1949), an economist, stressed labor market, manpower and other economic factors in vocational choice. Psycholgists, on the other hand, are concerned to a greater degree with personal traits and needs, as they apply to the individual's choice patterns. Ginzberg, Ginsberg, Axelrad, and Herma (1951) represent a major interdisciplinary group whose competencies lie in the fields of economics, psychiatry, sociology, and psychology, respectively. Similarly, Blau, Gustad, Jessor, Parnes, and Wilcox (1956), representing the combination of a sociologist, two psychologists, and two economists, developed their own conceptual framework for the study of vocational choice. According to Blau, et al., their theoretical efforts are a result of intimate exposure to and consideration of the many determinants of vocational choice.

There are many psychological theories of vocational choice and development. Of those theories, John Holland's appears to be particularly applicable to non-professional workers. In addition to Holland's theory of vocational choice, several sociological theories will also be examined in an attempt to explain the vocational choice behavior of non-professionals.

Before the contributions relating to Holland's theory are considered, it may be well to note some differences in the viewpoints of these two disciplines. The psychologist is concerned with individual variation within a given social class, as well as the determinants of vocational choice that explain the broad distribution of individuals in the labor market.

> ". . . he (the psycholgist) may know that sons of fathers who are professional men will generally choose a profession or an occupation in the upper levels of management, but the psychologist is concerned with what determines which profession the son chooses. What determines whether a young man will be a lawyer or physician, a carpenter or an electrician, a truck driver or a punch press operator? Secondly, the psychologist is concerned with individual variables that cause vertical mobility. Thirdly, the psychologist placed emphasis on individual variability and dynamics as related to vocational choice; the sociologist places emphasis on group variability" (Hewer, 1963).

According to Crites (1969), the emphasis on factors external to the individual are paramount in the non-psychological theories of vocational choice. Environmental factors are considered to be the basic influences for individual vocational choice making. Individual characteristics such as intelligence, interests, and personality traits are related indirectly to vocational choice according to many sociologists. Chance or contingency factors, the laws of supply and demand, and the folkways and institutions of society appear to be the basic determining factors in the process of vocational choice, as postulated by accident, economic, and/or sociological "theories".

I: A REVIEW OF HOLLAND'S THEORY

Overview

The purpose of this section is to summarize recent research concerning the usefulness of John Holland's theory in understanding the vocational choices of non-professionals, and to review studies which assess the validity of the theory. Much of this section focuses on studies of non-professional, non-managerial workers, although other recent studies of direct interest are also reviewed. This paper also reviews studies relevant to high school

students in vocational training programs, young adolescents, or persons in training in the non-professional, non-managerial areas. Some groups may not be considered "workers", but because they hold a lower level occupational status we have included them.

For this review, "non-professional worker" is defined as an employed, adult man or woman whose job title, as specified in the Dictionary of Occupational Titles (U.S. Department of Labor, 1965), does not start with codes 0 or 1 (professional and managerial) and whose level of general educational development (GED) falls between 1-4 (that is: no special training, elementary school, high school, some college, technical or business training). Persons with GED levels at 5 or 6 (college training) are not included as "non-professional, non-managerial workers".

Holland's theory (1959), briefly summarized, assumes that at the time of vocational choice, an individual is the product of his heredity and of a wide range of environmental forces. From his experiences the individual develops a hierarchy of orientations for coping with his environment. Each of these personal orientations has its counterparts in environmental settings of different orientations. Thus, the theory proposes that the individual gravitates, so to speak, toward the specific environments which are congruent with his personal orientation hierarchy, or pattern. Holland has identified six model orientations, each of which is composed of characteristic coping patterns, personal traits, educational and vocational patterns, and other attributes. The orientations are termed: Realistic, Investigative, Social, Conventional, Enterprising, and Artistic. Recent research by Holland and his colleagues (1969) has confirmed that the

orientations are related psycholgoically and has demonstrated a spatial relationship, a hexagonal model, as well.

Several other assumptions, of a secondary nature, have been proposed by Holland and tested by many researchers. They include the concepts of: consistency, congruence, and homogeneity. Consistency refers to the extent of relatedness between pairs of personality types (i.e., Realistic, Artistic), within an individual, which would be manifested on a personality pattern. An inconsistent pattern is a personality pattern in which the subject indicates substantial interest for two or three orientations which are not logically compatible. For example, high scores on the Realistic and Artistic scales, placing them side by side on a pattern code, would indicate that the subject liked occupations and activities which are, normally, mutually exclusive.

Congruence requires the comparison of the personality orientation of an individual and of an environment. Similarity of person-environment types defines congruence, whereas incongruence "occurs when a type lives in an environment that provides opportunities and rewards foreign to the person's preferences and abilities - for instance, a realistic type in a social environment" (Holland, 1973, p. 4-5).

Homogeneity (now termed differentiation) refers to the extent to which a person or environment resembles but a single classification type. The heterogeneous, or less well-differentiated, person has peak scores on several orientations (e.g., VPI scales). Finally, stability of vocational choice refers to the degree to which the worker when changing jobs, stayed in the same field or occupation (a "non-changer"), moved to a major field

or occupation in the same type as his original choice (an "intraclass changer"), or moved from an occupation in one type to an occupation in a different type (an "interclass changer") (Holland, 1966).

Some of Holland's work has been subject to the criticism of limited generality since his subjects have been, in large part, persons who functioned at higher intellectual levels. This problem is not unique to Holland; most researchers (including Ginzberg and his colleagues) tend to focus on young, middle-upper class persons - often college students. Most studies which have tested propositions arising from Holland's (1966) theory of vocational choice have used college students and National Merit Scholarship finalists (Bailey, 1971; Elton, 1971, Elton and Rose, 1970; Folsom, 1969; Frantz and Walsh, 1972; Holland, 1962, 1963, 1964, 1968; Holland and Lutz, 1968; Holland and Nichols, 1964; Morrow, 1971; Osipow and Wall, 1966; Walsh and Barrow, 1971; Walsh and Lacey, 1969; Walsh and Lewis, 1972; Walsh and Russell, 1969; Williams, 1972).

Recently, Holland and his colleagues (1973) applied Holland's occupational classification to a national sample of retrospective work histories, and also tested a number of hypotheses related to Holland's vocational choice theory. The results of the study suggested that the theory <u>can</u> be applied to adult work histories. Holland's (1973) summarization of his classification scheme and his review of the usefulness of the theory implies a need for further research. New research efforts will be essential to provide useful information regarding the applicability of the theory to the non-professional, non-managerial populations.

Holland's recent review of research supports the main proposition of

his theory. The personality types Holland describes appear to mature, perceive occupations, seek occupations, make various degrees of changes among occupations, and exhibit behaviors paralleling theoretical expectations. The environmental models Holland outlines appear useful to characterize not only occupational, but also educational environments. Holland's environmental descriptions, established with relation to the six personality types, are clearly consonant with many physical and non-psychological aspects of an environment. Finally, the research evidence indicates, to a limited degree that (as predicted) personality types are influenced by environments.

Congruence and Consistency: High School Students

Werner (1969) studied the applicability of Holland's theory to high school students enrolled in vocational education programs by assessing the relationship between the students' personality orientations and their "working" environments, and by relating consistency, congruence and homogeneity to vocational achievement and satisfaction. Six training areas represented each of Holland's occupational types: auto mechanics for Realistic, technical electronics for Investigative, practical nursing for Social, data processing for Conventional, distributive education for Enterprising, and commercial art for Artistic. Subjects were assessed with the Vocational Preference Inventory (VPI), the Kuder Preference Record, and questionnaires about occupational concerns and achievement. A nursing student with a VPI profile highest on the Social scale was said to be working in an environment congruent with her vocational personality.

The results were that students in environments congruent with their

personality had higher achievement scores, higher satisfaction scores (boys only), and a better chance of remaining in their vocational training program than did incongruent students. Concerning the consistency hypotheses, Werner found that students with inconsistent personality patterns had higher achievement scores but were less likely to remain in the training program than consistent students. In sum, these mixed results strongly support Holland's views regarding congruence but not concerning the relationship of consistency and homogeneity to other vocational constructs.

Johnson (1972) used a sample of about 400 high school, vocational-technical students to study Holland's occupational classification system, his concept of personality consistency and the relationship of VPI personality patterns to success in vocational-technical training. He found that student VPI scale scores were relatively effective for discriminating between the major vocational-technical training areas. Also, Holland's view of consistent and inconsistent personality patterns was supported except the Realistic-Enterprising scales appeared to represent a consistent pattern. This last result contradicts the theoretical hypothesis and is contrary to recent findings (Holland, Whitney, Cole and Richards, 1969) concerning the spatial relationships of the six personality types. Lastly, as with a study by Bates, Parker and McCoy (1970), "no evidence was found to support the hypothesis that congruent, consistent, and homogeneous personality patterns are more closely related to high academic achievement than the non-congruent, inconsistent and heterogeneous patterns." This result is difficult to explain since, as will be noted in a comment on the Bates, et al. study, the logical expectation would be the converse. Perhaps

it is unrealistic to equate vocational achievement (i.e., satisfactoriness and/or success) with academic achievement, even though the two would seem to be almost equivalent in a vocational-technical high school.

Hollander and Parker (1969) also studied adolescents' perceptions, but focused on the relationship between Holland's theoretical categories and stereotyped needs ascribed to six specific occupations in the categories. The occupational titles used to determine the categorical stereotypes were: auto mechanic - Realistic; scientist - Investigative; teacher - Social; bankteller - Conventional; business executive - Enterprising; and artist - Artistic. It was assumed that these occupations are included in the vocational awareness of high school sophomores, the subjects for this study. The Adjective Check List (Gough and Heilbrun, 1965), which includes three-hundred behavioral adjectives involving 15 needs scales, was used.

These researchers found that stereotypes of occupations representing each of Holland's categories were generally consistent with the theoretical formulations for each category. This finding supports the view that a person making a vocational choice "searches" for environments which satisfy his orientations and needs. In Ginzberg's (1972) terms, people seek to find the best "occupational fit" for themselves in the world of work. It is also implied that individuals possess a catalogue of occupational stereotypes which may be used to implement vocational choice.

In a further study, Hollander and Parker (1972) tested Holland's assumption that vocational choice involves, in part, congruence between self-description and occupational stereotypes. Holland (1973) suggested that not only are vocational stereotypes used in the choice process but

that such stereotypes are, to a large extent, accurate. Banducci (1970) found that the occupational stereotypes of students from low socio-economic status' were less accurate than those of students in higher social classes.

As in their previous research, Hollander and Parker used a small sample of 54 high school sophomores. They wished to determine if stereotypes of occupational preferences were related to self-description. The Adjective Check List was administered to obtain self-descriptions and stereotypic descriptions of a person in the one most preferred occupation and the one least preferred occupation. To assess preferences, the Occupational Preference List (Hollander, 1967) was used; it contains 36 occupations, each representative of one of Holland's six environmental categories.

The authors hypothesized a substantial agreement between adolescent self-descriptions and their stereotypic description of an individual in their most preferred occupation. That is, it was expected that students would perceive themselves and other persons who worked in a preferred occupation in similar adjectival terms. A second hypothesis predicted that the stereotype of a person in a least preferred occupation would be unrelated to the self-description of the adolescent. There were no expectations that self-description and stereotype of individuals in least preferred jobs would be different, just that such descriptions would not correlate.

The results suggested that adolescents use stereotypes in occupational exploration and vocational choice, and that there may be a self-job matching process in which they engage. All but two correlation coefficients for each ACL scale were significant for the relationship between self-description and one's most preferred occupation. The researchers also found that

high school students tended to choose their most preferred occupation and their least preferred occupation from different Holland categories. In addition, the hypothesis of no relationship between self-descriptions and stereotypes of least preferred occupations was confirmed.

This research supports a part of Holland's theory, in that vocational choice decision-making includes the comparison of one's occupational stereotypes with one's own perception of self. This finding is significant in understanding Holland's (1959) theoretical statement that a person, in making a vocational choice, "searches" for environments which match his vocational style and which satisfy his hierarchy of adjustive orientations.

Congruence and Consistency: Working Adults

Using subjects who were adult, non-professional workers and who had successfully used vocational rehabilitation services, Bates, Parker and McCoy (1970) studied the relationship of several components of Holland's theory to work adjustment. More specifically, these researchers hypothesized that high personality-environment congruence would be associated with high job satisfactoriness (also termed "vocational achievement") and job satisfaction. They also expected high personality consistency and prominent profile homogeneity (renamed "differentiation" by Holland) to be similarly related to satisfactoriness and satisfaction. Since higher levels of consistency imply a substantial degree of personal or vocational stability and since a well differentiated VPI profile implies interest definitiveness and commitment, it would logically follow that persons with such characteristics would tend to experience high levels of job satisfaction and would

tend to be viewed satisfactorily by their employers. This logical relationship would be further strengthened given a high personality-environment congruence; that is, for example, a situation in which a Social-type person is working in a Social-type milieu.

The results of this study with a working adult sample were essentially negative. In the light of much support for the validity of Holland's congruence, consistency and differentiation constructs, it is difficult to understand these results. Some possible explanations include: 1) Holland's theory may be most relevant for a non-working, student population or, alternatively, it may not be applicable to rehabilitants with physical and psychological disabilities; 2) The extremely small return (12%; n=259) of the marked questionnaires provided biased sampling and, thus, non-representative or distorted data; and 3) The statistical analyses (a series of Spearman rank order correlations) were not as robust or as appropriate as other, more powerful techniques. Clearly, this type of study should be replicated or, more parsiminously, the data should be re-analysed.

Whereas most tests of Holland's theory of vocational choice have utilized students as research subjects, Hughes (1972) employed a diversified sample of employed adults to test a series of basic hypotheses. The sample was comprised of 400 men, 25-35 years of age, who had held the same job for at least three years. Concerning the prediction of a substantial degree of congruence between worker's measured personality and environmental orientation, the results indicated only a low level of support for the theoretical view that people work at jobs which would appear to be appropriate to their personality orientation or vocational style. Because

subjects of different personality types provided differential results, the level of agreement between personal orientation and environmental type ranged from 14% to 43% of the cases.

Another hypothesis from Hughes' study, which yielded positive results, was that "employed people work at job levels which can be predicted from the summation of intelligence and self-evaluation." The SVIB Occupational Level scale, Sims Occupational Rating Scale and Quick Word Intelligence Tests were used, in a logically derived formula, to predict occupational level (OL). Predicted OL's were then compared with "actual" levels (job titles assigned in a modified Roe [1956] classification) and a "hit rate" of 55% was discovered. Thus, a substantial number of correct predictions were made supporting Holland's (1966, 1973) formulations.

An earlier study by Stockin (1964) also provided strong support for Holland's occupational level concept. Stockin used procedures similar to those described above for Hughes' research, except that 170 male high school seniors formed the sample. The "hit rate" between "actual" level (derived from expressed vocational choices using Roe's [1956] system) and the predicted level, was 48%. Apparently an individual's percepts of himself and his intelligence level are related, and may to some extent, influence his future occupational level.

The other results in this study were that subjects did not rate themselves on certain personality dimensions in accordance with Holland's theory. In addition, no differences were found between consistent and inconsistent men in terms of job satisfaction or job stability. The last finding might have been different if Hughes' definition of job stability

(number of jobs held) had included consideration of the subject's reasons for leaving each job. Recently, Holland, et al. (1973) found that the consistency of a man's occupational code can predict the category of his job five and ten years later. Conversely, the future job classification of men with inconsistent codes is not as predictable. These findings are particularly important since a national representative sample of employed men was used.

Using a sample of 89 working adults (aged 21 to 55) who were attending community college part-time, Andrews (1973) obtained results which support Holland's premise that people "search" for work environments compatible with their vocational personality. Andrews' hypothesis was that there would be a closer relationship between a person's future work environment and his current vocational personality (VPI code) than between his present job environments and current personality. Appropriate comparisons were made using current VPI scores (personality) and subject descriptions of present and future job environments. These results on a diverse group of workers lend support to previous findings in studies of younger college and high school populations.

In a research endeavor which preceded Hughes' study of working men, Lacey (1971) also tested the validity of a portion of Holland's theory by comparing the measured vocational personality (VPI score) of 230 employed adults with their job titles (work environment). The sample of professional men was divided into six groups which matched Holland's vocational models: Realistic - project engineers; Investigative - research chemists and computer programmers; Social - high school teachers; Conventional - actuaries;

Enterprising - bank executives and insurance company executives; and Artistic - college English professors and music teachers. In general, the results supported Holland's typology. In some cases, Lacey's selection of occupational types with a predictable mixture of personality types may have diminished the impact of otherwise strong results. For example, college professors who teach english may have Artistic, Intellectual or Social scores. Similarly, project engineers will have high Realistic and Investigative interests.

In another investigation in which a large sample of working adults was used, Parsons (1972) studied the occupational stability of workers holding various personality orientations and the relationship between job satisfaction and stability. Holland's classification scheme was used to categorize the orientation of 5,000 workers between ages 45-59 years and Holland's theory was used to predict differential levels of stability.

Realistic-type workers, as predicted, were the most vocationally stable in that they tended to stay in Realistic environments over their entire work history. Parsons collected data on the subjects' first job, current job and "best" job. Stability was defined, apparently, by the extent of interclass changes (Holland, 1966) and, it seems, by the amount of occupational mobility. Another result was that job changers were more satisfied with their current job than were non-changers. Non-changers, according to Parsons' data, were older, less well educated, in poorer health and tended to originate from rural settings.

Parsons' study provides moderate support for some elements of Holland's vocational choice theory, especially the conception that vocational stabil-

ity is more characteristic of some personality orientations. It may be relevant to note that the psychological and operational definition of vocational stability was rather narrow - focusing solely on whether a worker was a "changer" or a "non-changer". Holland differentiates three categories of personality orientation change: no change, intra-class change (change on VPI second code only) and inter- class change (change in orientation - VPI first letter code). If the construct of vocational stability included several other elements (for example, tenure on each job, reasons for leaving and on-the-job functioning), perhaps the results in this study would have been substantially more positive.

There appears to be a need not only for more comprehensive studies of the personality and environmental hypotheses, but for research to investigate person-environment interactions. Vocational satisfaction, stability, and achievement may depend on the congruence between one's personality and the environment (composed largely of other people) in which one works. Just as we are more comfortable among friends whose tastes, talents and values are similar to our own, so are we more likely to perform well at a vocational level in which we "fit" psychologically. In addition, Holland (1973) suggests that a clearer understanding of the process of change is needed.

An attempt has been made to review and re-think studies involving non-professional, non-managerial persons as related to Holland's theory of vocational choice. The evidence for the usefulness of Holland's theory with this population is moderately positive, with some studies eliciting mixed results. Unfortunately, very little research using non-professional

workers has been carried out to date. Perhaps this review will stimulate critical thinking and, more importantly, critical research behaving.

II. Sociological Views of Vocational Choice

The remainder of this paper will focus on the role that the social environment and the cultural organization may play in career development. Sociologists have given considerable attention to the occupational behavior of non-professional workers. Some of the theories and studies reviewed in this section deal with social factors and personal characteristics relevant to the vocational choice processes of such workers. The relationship of parental influence to vocational behavior is also considered.

Although the "accident theory" is reviewed by several theorists and researchers, there are mixed feelings among many authorities as to whether or not these data and perceptions constitute a "theory". In addition, Crites (1969) made a distinction between chance occurrences and "contingency" factors which are "predictable and which can be taken into consideration when the individual plans his vocational future."

It is clear that personal, inherited characteristics are independent of one's culture, and that the interactions between such characteristics and social factors result in a certain vocational choice. The life styles of boys in different social environments is described by Havighurst (1964), and he illustrates various hypothetical case studies of the processes through which these life styles are established. Credence is given to the values within the home, the adult models that are available to the

individual and with whom he may identify, the differential rewards for work versus play, and for enterprise versus academic achievement. All of these influences are contributing factors to the individual's production and career pattern (Osipow, 1968).

Caplow (1954) noted two sociological (almost dichotomous) factors which are determinants of a person's occupation. The hereditary factor, in which the father's work history and life style serves as a model to the son, imposes strict limitations on the work alternatives for the son. The other extremity lies within the society where the occupational choice is exclusively the result of the personal characteristics of the individual. In Young's (1961) meritocratic culture, achievement is based solely on individual proficiency. In our society, the vocational choice process occurs somewhere in between these two sociological extremes. "At what particular point on the continuum the choice is made is a function of when and where in the culture one chooses to focus attention" (Osipow, 1968, p. 202).

Some writers in the sociological discipline have speculated on the projected state of humanity if social manipulation and selection were major forces affecting occupational selection. Huxley's Brave New World (1946) described the effects on society of training each individual to fulfill a prescribed role in society. In The Rise of the Meritocracy, Young (1961) satirized a characterization of life in a culture where people "rise to the top" purely on the basis of their talents. Individuals existing within the framework of this lifestyle are not equipped with such advantages as those resulting from family connections, money, or

irrelevant personal characteristics. Realistically, the idea of complete freedom of vocational choice is an exaggeration, as the freedom to choose seems to be limited in many ways (Cherevenik, 1956-57).

Ginzberg, et al. (1951) point to two sets of relatively independent factors which are operational in the process of occupational choice. On the one hand, at each point a given set of intraindividual determinants are present: abilities, interests, and aptitudes. At the other extreme are listed a set of extraindividual determinants: environmental demands, pressures, and constraints. Vocational or occupational choices are clearly a function of the interaction of the intra- and extra-individual pressures. It is unreasonable, therefore, to presume that one's vocational choice can be predicted on the basis of personal characteristics alone. Roff (1968) indicated that personal attributes are, in part, a function of environmental conditions. The individual does not make choices purely in terms of his self-concept. On the contrary, in some instances the individual's choices appear to be made for him by the environment in which he lives.

A further generalization can be derived from the critical idea that vocational choice is a process: this process often ends in a compromise (Ginzberg, et al., 1951; Ginzberg, 1972). As an individual develops, he seeks to derive maximum satisfaction from a vocational choice which was made through his knowledge about his interests, capacities and values, and about the opportunities and limitations that are presented in the real world. His choice would certainly be less complex if it were only based on a single factor, such as his interests or abilities, rather than several

environmental factors such as the labor market, the income structure, and whatever degree of social prestige that may be related to different kinds of work. Clearly, if the vocational decision-maker is making a vocational, cognitive decision, several interrelated internal, as well as external factors, need to be considered. The individual must find a balance among his interests and capacities, and a realistic occupational opportunity, even though a choice based on any one of these factors, exclusively, may result in a greater degree of satisfaction than that which may be obtained through the process of compromise.

Industrial and occupational sociologists seem to agree that the individual's vocational choice is predominantly determined by the impact that culture and society have upon those goals and objectives he values. In selecting an occupation, the individual is more or less directly influenced by several social systems, as described by Super and Bachrach (1957):

> The individual confronted with . . . choice decisions may be viewed as occupying the center of several concentric circles which represent the social systems with which he interacts. These systems are instrumental in his decisions and choices. The outer circle represents general American cultural variables (free enterprise, American democracy, Western values, American mores). Moving inward we come to the subcultural forces which exert themselves on the individual (class values, attitudes, customs). The next circle represents community variables (peer relationships, ethnic groupings, religious influences, social contacts). Finally, most directly impinging on the individual are the organizational settings in which he is operating at any given time: his home, school, family, church, and so on. (p. 104)

Lipsett (1962) comments that each of these levels of culture and society has varying effects on the individual's vocational choice, not only in different ways, but also in varying degrees of importance.

Neff (1968) criticized Super for being too much of a psychologist, and not enough of a general social scientist. Super is charged with committing the "psychologist's fallacy", a term suggested by William James. Super's (1957) general approach has been to identify the self-concept, to attempt to perform an analysis and assign measurement to it, and finally, to show that a relationship exists between self-concept and vocational choice. Neff views self-concept as a hypothetical psychological property, which is only one of many behavioral determinants of vocational selection, but is also not an extremely important determinant. Having an almost exclusive focus on the self-concept may make the researcher somewhat myopic concerning other relevant factors influencing the individual's vocational decision. Although Super's research finds its focus in the world of work, he does not sufficiently emphasize that occupational conditions prevailing in the real world are rarely, if ever, constant. As Neff (1968) indicated, too many environmental factors exist to assume a very close relationship between any set of attributes and attitudes, and the job functions workers actually perform.

While environmental constraints seem to be minimized by Super in his long-term research of the role of the self-concept in the vocational choice process, Ginzberg, et al. (1951) treats environmental factors as dynamically as Super has treated individual factors. In Ginzberg's (and associates) theory, as the individual progresses through the different stages of vocational development, the environmental constraints take on more decisive, and different, roles. While Super's (1957) theory is not as complex, both theorists have contributed extensively to the field of

vocational psychology. They have shown, empirically, that work behavior begins in late childhood and does not crystallize until several years later. During this developmental process, the attitudes of the individual may change considerably. Both Super and Ginzberg appear to agree on the critical importance of later childhood and adolescent experiences, in contrast to those implied by psychoanalytic theorists with respect to infancy and early childhood.

Recently, Ginzberg (1972) restated his theory of occupational choice to make it more consistent with new observations concerning the work style and vocational behavior of non-professional workers, "Occupational choice is a lifelong process of decision-making in which the individual seeks to find the optimal fit between his career preparation and goals and the realities of the world of work" (p. 172). Ginzberg has dropped his notion of the "irreversibility" of vocational decisions made in one's late teens and early twenties, has substituted "optimization" for "compromise" in describing the interaction of personal and environmental factors in decision-making, and has underscored the "process" of vocational choice over one's entire working life. In addition, Ginzberg pointed out that persons from low income families are unlikely to pursue vocational goals requiring advanced education and re-emphasized his conviction that the individual (not reality factors) is the "prime mover in the decision-making process." Lastly, Ginzberg decries such constraints on occupational choice as inadequacies in the educational system, poor linkages among vocational institutions (work, school, military, labor market, etc.), and deficient guidance services both at the secondary school level and

for post-school individuals.

Caplow (1954), in his book Sociology of Work, indicated that we know surprisingly little about how people choose their vocations. He emphasized his view that accident and error play a large part in occupational decision-making. As do Miller and Form (1951), Caplow believed that the occupational level of parents is somehow passed on to their children, and that the "inherited" vocational choice lies within a restricted range of occupations that is acceptable to the particular social class in which the individual belongs. Hollingshead (1941) has previously noted a strong relationship between social class and occupational choice. However, Zytowski (1968) questions a theoretical formulation which overemphasizes the relationship of social factors to vocational behavior, in the fashion that is presented by Caplow. This emphasis parallels the psychological theories which tend to link only internal, personological determinants to vocational choice, entry and career. To be sure, it should be noted that most theorists in vocational psychology mention the impact of sociological factors in their discussions.

Osipow (1968) observed that studies comparing the occupations, or occupational levels, of fathers and sons showed that the careers of children generally resembled fathers (Clark, 1967; Gunderson and Nelson, 1965; Jenson and Kirchner, 1955; Krippner, 1963; Samson and Stefflre, 1952). However, children tend to move slightly upward in occupation level, which may reflect a general upward striving in American society.

The contribution of social class to occupational behavior can be briefly summarized. First, there is a high correlation between a father's

occupation and the work which his children enter. This includes the occupational level and the class of occupation. Second, work values can be differentiated from social class to social class, but the work values of men within each class appear to be directly related to the values of those in the environment in which they were raised. Finally, the economic resources of the family appear to be a very important determinant of the worker's education and training level.

As Osipow (1968) noted, the key element in the sociological approach to occupational choice is the relevance of environmental factors beyond the control of the individual. Such factors have a major influence on education and vocational decision throughout the individual's life and should be included in one's views of the process of vocational choice. It seems very clear that most people, especially non-professionals, have less freedom of occupational choice than what might be anticipated by professionals. In addition, it is probable that a man's self-expectations are, to a degree, dependent upon society's expectations for him. Society may provide alternative vocational opportunities, consistent with social class membership; the individual will be the "prime mover".

The proposal that chance plays a major role in occupational decisions bears a relationship to the sociological view that environmental circumstances may influence the individual's choices. Persons who question the rationality of human behavior may believe that being in "the right place at the right time" is more contingent to vocational decision-making than is systematic planning and vocational counseling. According to Hewer (1963), Miller and Form (1951) believe that trial and error has

more influence on determining the vocational goals of individuals than does vocational counseling. As was noted, that chance factors do influence vocational decisions has not been excluded as an important variable in the psychological theories of vocational choice. However, psychologists have tended to neglect to elaborate on the effects that chance factors may have on careers. Psychologists seem to concentrate on minimizing the effects of chance factors, and assume that the individual almost always plays an active role in the control of his vocational decisions. Sociologists, on the other hand, concern themselves with systematizing the unsystematized environmental factors in an attempt to better understand these forces, so that the individual may learn to cope with them in an organized manner. Although both disciplines seem to recognize the influences that chance factors exert in decision-making, the sociologists continue to show an active interest in studying this phenomenon.

Crites (1969) made a distinction between chance factors and "contingency" factors relevant to vocational choice. The latter are predictable and can be taken into consideration when an individual plans his vocational future. Contingency factors are distinguished from chance factors in that their relationships to vocational choice are known; intelligence, socioeconomic status and race are examples of contingency factors. Chance factors may include changes in labor market conditions, strikes, unexpected personal events and serendipitous happenings. Crites also included as contingency factors "the availability of appropriate training facilities to prepare for an occupation, the extent of familial financial support during the period of training, the prospects for

admission to a training institution, and the anticipated occupational opportunities available after training is completed" (p. 80). Providing that data on these contingency factors have been collected, Crites believes that the individual's future job assignments, rate of advancement, and time of retirement can be accurately predicted. In fact, Super (1957) declares that "given sufficient knowledge, there is no such thing as chance" (p. 278). Chance and contingency factors are differentiated by that very criterion - that sufficient knowledge be given. The reason that chance factors are unpredictable is because nothing is known about them and their occurrence seems fortuitous. Consequently, Crites concludes that it is parsimonious (and wise) to retain both concepts.

Some social scientists have proposed that the vocational choices of non-professionals can be explained by the accident theory. Two occupational sociologists, Miller and Form (1951), analyzed the occupational backgrounds of a large number of young people and concluded that:

> One characteristic is outstanding in the experience of the case histories that have been cited. In their quest of a lifework there has been a vast amount of floundering, and chance experiences appear to have affected choices more than anything else. No single motivating influence underlies the majority of the choices made. It is the compounding of various experiences and influences which has finally crystallized into a wish for a certain occupation. Chance experiences undoubtedly explain the process by which most occupational choices are made. (p. 660)

As was indicated, Caplow (1954) placed much emphasis on accidental and personal factors in vocational choice. He also observed that "error and accident often play a larger part than the subject himself is willing to concede."

Although the "accident theory" is an explanation of vocational choice

phenomena, it needs to be evaluated for its usefulness as a theory, even though laymen and sociologists have extended a considerable degree of acceptance to it. One criticism of the "accident theory" is that it has been oversimplified, even though it does stress the importance of external factors. The significance of the individual's perceptions of external factors should be emphasized. In summary, the "accident theory" relies uncritically on external factors such as those involving chance, and the wide range of alternatives available to the individual are too often ignored.

To provide for a comprehensive theory of vocational choice, not only should the external forces operating upon the individual be taken into consideration, but also the analyses of the internal elements should be provided for, as these are the factors that condition the individual's responses.

Stefflre (1966) outlined ten propositions concerned with vocational development in an effort to stimulate work toward a unifying theory which might lead to a better understanding of an individual's occupational membership. One of these propositions stated that "the societally limiting forces that determine the occupational persona of any individual vary from the accidental to the essential." Stefflre believed that the type of work in which an individual engages and his work behavior is a reflection of a part of himself which he reveals publicly; it is his "persona". Since only the exceptional individual can choose his occupational persona with complete freedom, it is important to study the limitations he may encounter from society.

First, occupational choice may be determined, in part, by unique, unexpected or accidental individual contacts. Second, the general economic situation may have a strong influence on a vocational choice. Third, the person's sociological background may make an impact on the occupational level at which one works. Fourth, the type of personality and the individual's psychological status may lead him to search for occupations which allow a large measure of need fulfillment. Last, the philosophical views and the social values held by the individual may affect his attitudes about the meaning of life and of work, thereby influencing his selection of an occupational persona.

Because so many personal, social, vocational, psychological and economic factors seem to have a strong impact on the occupational persona it seems that a holistic, unified approach to the study of vocations is in order. Vocational choice and decision-making needs to be explored in terms of the economics of the labor market, the psychology of the self-concept and of personality adjustment, and the sociology of social mobility and occupational level (Blau, Parnes, Gustad, Jesson, and Wilcox, 1956). Perhaps future teams of social scientists (such as Ginzberg and his associates, and Blau and his colleagues) may grasp Stefflre's challenge to attempt to unify the diverse vocational and occupational choice theories.

Readers with interests in vocational counseling and vocational psychology may have adopted the usual orientation of psychologists - the person, the self, the individual. Fortunately, sociologists and economists have focused their attention on the role of extra-individual determinants of occupational choice and have suggested that a great deal of information is

available regarding the complexities of social environments and the impact of the environment on vocational decision-making. Mere knowledge about personal attributes will no longer be sufficient. By training and inclination the psychologist finds it easier to fix his attention on personal attributes rather than on the characteristics of environments. The bias is understandable, but it will have to be transcended if we are to gain a more thorough understanding of the complex relations between men and their work.

REFERENCES

Andrews, H.A. Personality patterns and vocational choice: A test of Holland's theory with adult part-time community college students. Journal of Counseling Psychology, 1973, 20 (5), 482-483.

Bailey, R.L. Testing Holland's theory. Measurement and Evaluation in Guidance, 1971, 4, 108-114.

Banducci, R. Accuracy of occupational stereotypes of grade-twelve boys. Journal of Counseling Psychology, 1970, 17, 534-539.

Bates, G.L., Parker, H.J. and McCoy, J.F. Vocational rehabilitants' personality and work adjustment: A test of Holland's theory of vocational choice. Psychological Reports, 1970, 26, 511-516.

Blau, P.M., Gustad, J.W., Jessor, R., Parnes, H.S. and Wilcock, R.C. Occupational choice: A conceptual framework. Industrial Labor Relations Review, 1956, 9, 531-543.

Caplow, T. The sociology of work. Minneapolis: University of Minnesota Press, 1954.

Cherevenik, E. Who says there is freedom of occupational choice? Vocational Guidance Quarterly, 1956-57, 5, 57-59.

Clark, E.T. Influence of sex and social class on occupational preference and perception. Personnel and Guidance Journal, 1967, 45, 440-444.

Crites, J.O. Vocational psychology. New York: McGraw-Hill, 1969.

Elton, C.F. Male career role and vocational choice: Their prediction with personality and aptitude variables. Journal of Counseling Psychology, 1967, 14, 99-105.

Elton, C.F. and Rose, H.A. Male occupational constancy and change: Its prediction according to Holland's theory. Journal of Counseling Psychology, 1970, 17, Part 2, No. 6.

Folsom, C.H., Jr. An investigation of Holland's theory of vocational choice. Journal of Counseling Psychology, 1969, 16, 260-266.

Frantz, T.T. and Walsh, E.P. Exploration of Holland's theory of vocational choice in graduate school environments. Journal of Vocational Behavior, 1972, 2, 223-232.

Ginzberg, E., Ginsberg, S.W., Axelrad, S. and Herma, J.L. Occupational choice: An approach to a general theory. New York: Columbia University Press, 1951.

Ginzberg, E. Toward a theory of occupational choice: A restatement. Vocational Guidance Quarterly, 1972, 20 (3), 169-176.

Gough, H.G. and Heilbrun, A.B., Jr. Manual for the Adjective Check List. Palo Alto, California: Consulting Psychologists Press, 1965.

Gunderson, E.K. and Nelson, P.D. Socio-economic status and Navy occupations. Personnel and Guidance Journal, 1965, 44, 263-266.

Harris, S.E. The market for college graduates. Cambridge: Harvard University Press, 1949.

Havighurst, R.J. Youth in exploration and man emergent. In Borow, H. (Ed.), Man in a world at work. Boston: Houghton Mifflin, 1964. Pp. 215-236.

Hewer, V.H. What do theories of vocational choice mean to a counselor? Journal of Counseling Psychology, 1963, 10 (2), 118-125.

Holland, J.L. A theory of vocational choice. Journal of Counseling Psychology, 1959, 6, 35-45.

Holland, J.L. Some explorations of a theory of vocational choice: I. One and two-year longitudinal studies. Psychological Monographs, 1962, 76 (26, Whole No. 545).

Holland, J.L. Explorations of a theory of vocational choice and achievement: II. A four-year prediction study. Psychological Reports, 1963, 12, 537-594.

Holland, J.L. Explorations of a theory of vocational choice: V. A one-year prediction study. Moravia, N.Y. Chronical Guidance Professional Service, 1964.

Holland, J.L. The psychology of vocational choice: A theory of personality types and model environments. Waltham, Mass.: Blaisdell, 1966.

Holland, J.L. Explorations of a theory of vocational choice: VI. A longitudinal study using a sample of typical college students. Journal of Applied Psychology, 1968, 52, 1-37.

Holland, J.L. Making vocational choices: A theory of careers. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

Holland, J.L., Cole, N.S. and Richards, J.M., Jr. An empirical occupational classification derived from a theory of personality and intended for practice and research. ACT Research Report No. 29. Iowa City: American College Testing Program, 1969.

Holland, J L. and Lutz, S W. The predictive value of a student's choice of vocation. Personnel and Guidance Journal, 1968, 46, 428-436.

Holland, J L. and Nichols, R C. Explorations of a theory of vocational choice: III. A longitudinal study of change in major field of study. Personnel and Guidance Journal, 1964, 43, 235-242.

Holland, J L., Sorenson, A B., Clark, J P., Nafziger, D H. and Blum, Z D. Applying an occupational classification to a representative sample of work histories. Journal of Applied Psychology, 1973, 58 (1), 34-41.

Hollander, M A. Occupational preference list. Oklahoma City, Oklahoma: Mimeographed, 1967.

Hollander, M.A. and Parker, H J . Occupational stereotypes and needs: Their relationship to vocational choice. Vocational Guidance Quarterly, 1969, 18, 91-98.

Hollander, M A. and Parker, H J . Occupational stereotypes and self-descriptions: Their relationship to vocational choice. Journal of Vocational Behavior, 1972, 2 (1), 57-65.

Hollingshead, A B. Elmtown's youth. New York: Wiley, 1941.

Hughes, H M. Vocational choice, level, and consistency: An investigation of Holland's theory on an employed sample. Journal of Vocational Behavior, 1972, 2 (4), 377-388.

Huxley, A L. Brave new world. New York: Harper and Row, 1946.

Jenson, P G. and Kirchner, W K. A national answer to the question, "Do sons follow their fathers' occupations?" Journal of Applied Psychology, 1955, 39, 419-421.

Johnson, D M. An investigation of Holland's theory of vocational psychology. Dissertation Abstracts International, 1972 (Feb.), 32 (8-A), 4421.

Krippner, S. Junior high school students' vocational preferences and their parents' occupational levels. Personnel and Guidance Journal, 1963, 41, 590-595.

Lacey, D. Holland's vocational models: A study of work groups and need satisfaction. Journal of Vocational Behavior, 1971, 1, 105-122.

Lipsett, L. Social factors in vocational development. Personnel and Guidance Journal, 1962, 40, 432-437.

Miller, D.C. and Form, W.H. Industrial psychology. New York: Harper and Row, 1951.

Morrow, J.M., Jr. A test of Holland's theory. Journal of Counseling Psychology, 1971, 18, 422-425.

Neff, W.S. Work and human behavior. New York: Atherton Press, 1968.

Osipow, S.H. Theories of career development. New York: Appleton-Century-Crofts, 1968.

Osipow, S.H. and Wall, H.W. Personality types and vocational choice: A test of Holland's theory. Personnel and Guidance Journal, 1966, 45, 37-42.

Parsons, G.E. An application of Holland's vocational theory to an empirical study of occupational mobility of men age 45 to 59. Unpublished doctoral dissertation, Ohio State University, 1972.

Roe, A. The psychology of occupations. New York: Wiley, 1956.

Samson, R. and Stefflre, B. Like father . . . like son? Personnel and Guidance Journal, 1952, 31, 35-39.

Stefflre, B. Vocational development: Ten propositions in search of a theory. Personnel and Guidance Journal, 1966, 44, 611-616.

Stockin, B.C. A test of Holland's occupational level formulation. Personnel and Guidance Journal, 1964, 42, 599-602.

Super, D.E. The psychology of careers. New York: Harper and Row, 1957.

Super, D.E. and Bachrach, P.B. Scientific careers and vocational development theory. New York: Bureau of Publications, Teachers College, Columbia University, 1957.

U.S. Department of Labor. Dictionary of Occupational Titles. Washington, D.C., 1965.

Walsh, W.B. and Barrow, C.A. Consistent and inconsistent career preferences and personality. Journal of Vocational Behavior, 1971, 1, 271-278.

Walsh, W.B. and Lacey, D.W. Perceived change and Holland's theory. Journal of Counseling Psychology, 1969, 16, 348-352.

Walsh, W.B. and Lewis, R.O. Consistent, inconsistent, and undecided career preferences and personality. Journal of Vocational Behavior, 1972, 2, 309-316.

Walsh, W.B. and Russell, J.H. College major choice and personal adjustment. Personnel and Guidance Journal, 1969, 47, 685-688.

Werner, W.E. A study of Holland's theory of vocational choice as it applies to vocational high school students. Dissertation Abstracts International, 1969, 30, 1832A-1833A.

Williams, C.M. Occupational choice of male graduate students as related to values and personality: A test of Holland's theory. Journal of Vocational Behavior, 1972, 2, 39-46.

Young, M.D. The rise of the meritocracy. Baltimore: Penguin Books, 1961.

Zytowski, D.G. Vocational behavior. New York: Holt, Rinehart, Winston, 1968.